



Rona-Shani Evyasaf

Gardens at a Crossroads: The Influence of Persian and Egyptian Gardens on the Hellenistic Royal Gardens of Judea

Although pre-Hellenistic Persian and Egyptian gardens have long been recognized as an influence on the Hellenistic garden tradition, the degree of this influence has sometimes been debated. Scholars such as Sonne, Nielsen and Bedal have claimed that the Achaemenid Persian royal garden was the primary influence on the Hellenistic palace gardens¹. The Persian *paradeisos*, which was a hunting park or a formal garden around the palace, was adopted by the new Hellenistic kings either together with the Persian palaces themselves, or as a concept that influenced the design of their new palaces². According to Nielsen and Bazin, while a strong Persian influence can be seen in the Seleucid kingdom, it is also evident in the palaces and gardens of the Ptolemaic kingdom³. They generally consider the Egyptian garden influence to be of secondary importance⁴. According to some scholars, however, such as Carroll-Spillecke and Bremmer, the use of the term *paradeisos* does not necessarily demonstrate a connection to the Persian royal gardens, since it was also used to describe other features such as huge plantations⁵. Moreover, since the only Hellenistic royal gardens described in the ancient sources⁶ are the gardens of the palace in Alexandria, Carroll-Spillecke claims that the only influence on them was that of the Egyptian gardens, and that there was hardly any influence, whether Persian or Egyptian, on the royal gardens in the Macedonian and Seleucid kingdoms⁷.

One of the problems underlying this debate is that few actual Hellenistic gardens have been uncovered so far, and most of the evidence is based on literary sources rather than the archaeological record. Some of the best-preserved surviving examples of Hellenistic royal gardens are in Judea, notably the Hasmonean royal gardens at Jericho and the garden of the aristocratic Tobiad estate at Iraq el-Amir. These gardens will be the focus of this study⁸.

¹ SONNE 1996; NIELSEN 1994, 36, 50–1; 1996; 2001; BEDAL 2004, 147–55.

² BEDAL (2004, 147) points out that according to Polybius (31, 29, 1–8), the Macedonian kings had large hunting parks that were probably influenced by the Persian *paradeisos*.

³ BAZIN 1990, 16; NIELSEN 1994, 115, 128.

⁴ NIELSEN (1994, 31, 133–6; 1996, 210) claims that, though the Ptolemaic kings were influenced by the Egyptian palaces and gardens (mainly by Apries's palace at Memphis), Ptolemy I, who built the *Basileia* palace in Alexandria, was greatly influenced by the Persian palaces and gardens that he saw while travelling with Alexander the Great.

⁵ CARROLL-SPILLECKE 1989, 49–62; 1992, 91–4; BREMMER 2002, 114–9.

⁶ Strabo, Geography, xvii, 1, 8; Pliny, NH v, 11, 62–3.

⁷ CARROLL-SPILLECKE 1989, 53; 1992, 94; CARROLL 2003, 30.

⁸ Another site in which gardens connected to a Hellenistic governor's palace were found is Jebel Khalid in Syria. The excavations in the third-century BCE palace at the site revealed a flower bed, 82 cm wide, that surrounded the main paved peristyle courtyard and an enclosed courtyard, on the northwest side of the building, that was probably used as a garden (CLARKE 2001, 217–8, 244). However,

Although it is complicated to measure an influence, it can be seen in ideas, use of terms, elements of design, and so on. This study will attempt to assess the influence of the pre-Hellenistic royal Persian and Egyptian gardens on the Hellenistic ones, primarily by examining the physical aspects of design⁹. By considering the different elements of the gardens, their arrangement in space, the relationship between them and the palaces with which they are associated, their design and the different features used in them, an attempt will be made to determine whether, how and to what extent the Hellenistic royal gardens of Judea were influenced by the pre-Hellenistic Persian and Egyptian garden cultures.

Some other pre-Hellenistic cultures, the Assyrian, the Neo-Babylonian and the Greek, may also have influenced the Hellenistic royal gardens. According to Nielsen, the use of Neo-Babylonian palaces, such as the palaces in Babylon¹⁰, by the first Hellenistic kings might have later influenced the design of their new gardens¹¹. Unfortunately, we do not know if the gardens in those palaces were still the original Assyrian or Neo-Babylonian gardens, planted centuries earlier, or had been changed by the Persian kings who used the palaces before the arrival of the Hellenistic kings¹². Moreover, the evidence that we have today for the design of the Assyrian and Neo-Babylonian gardens is inadequate to measure their effect on the design of the Hellenistic royal gardens¹³, and they will consequently not be discussed here. As for the Greek influence, though it must not be overlooked, the influence on the royal Hellenistic gardens seems to have come mainly from the public Greek gardens, such as the gardens of the *gymnasium*¹⁴. The paucity of evidence on classical Greek royal gardens, either from excavation or from the historical sources, makes their contribution to the design of royal Hellenistic gardens hard to identify and they too will not be discussed in this article.

The main sources for our knowledge of the design of the Persian gardens are the writings of Xenophon and other historians¹⁵ and the excavations of the sixth-century BCE palace of Cyrus the Great in Pasargadae¹⁶. Although other Achaemenid palaces, like those in Susa¹⁷ and Persepolis, have been excavated, their gardens are not yet fully recognized¹⁸. From the historical sources we learn that the *paradeisos*, the royal garden, was on the one hand a large park used for hunting and on the other hand an enclosed area next to the palace¹⁹. Unfortunately, we do not have a specific description of the large park's design, apart from the fact that it was an enclosed area and that in some cases, as described by Xenophon, a river flowed through it²⁰. Because these parks were extensive, had rivers running through them and contained an abundance of wild animals (since they were used by the Persian kings as hunting grounds), it is

since this paper focuses on the gardens of the Judean kingdom, the garden at Jebel Khalid will not be discussed here. For the borders of the Judean kingdom during the Hellenistic period, see TSAFRIR, DI SEGNI, GREEN 1994, 9–10.

⁹ Since the research involves the comparison of data from sources of different types (historical writings, different art media and archaeology), the information presented here will in some cases be based on materials deriving from different periods, or based on artistic depictions that may be more stylized than realistic. Due caution should therefore be exercised in interpreting the results, and one can only hope that future excavations and the ongoing research will shed more light on the subject in the future.

¹⁰ According to Nielsen (1994, 32–4), Alexander and his generals stayed for some time in the palaces of Babylon; among them was the Southern Palace, whose gardens included the renowned Hanging Gardens. However, there is no evidence that those gardens still existed in the days of Alexander and his successors (see also *infra*, N. 13). One should also take into consideration the possibility, suggested by Dalley (1994), that the Hanging Gardens were actually in Nineveh and not in Babylon.

¹¹ Nielsen (1994, 34; 1996, 210) claims that the Neo-Babylonian palaces and their gardens influenced the Macedonian and Hellenistic palaces.

¹² For example, the Babylonian palaces were extended, restructured and repaired several times by the Neo-Babylonian kings, later by the Achaemenid monarchs, and even later by the Hellenistic kings (KUERT 2001, 78, 84–5; HAERINCK 1997, 289; NIELSEN 1994, 32, 34).

¹³ For further information on the Assyrian and Neo-Babylonian gardens, see WISEMAN 1983; MARGUERON 1992.

¹⁴ NIELSEN 1994, 25; 2001, 174–5; SONNE 1996, 139–40.

¹⁵ For examples, see Xenophon, *Oec.* IV, 13–4, 20–4; *Anab.* I, 4, 10; Diodorus, *Hist.* 16, 41.

¹⁶ For the report on the excavation, see STRONACH 1978; BOUCHARLAT 2001, 115–8. For the palace's garden, see STRONACH 1989; 1994; 1997, 50–3; BOUCHARLAT 2002, 280.

¹⁷ For a summary of the excavations in Susa, see BOUCHARLAT 1997.

¹⁸ For the gardens in the Achaemenid palaces of Susa and Persepolis, see NIELSEN 1994, 35, 38–44, 49–50. For different interpretations of the use of the areas identified by Nielsen as gardens, see NIELSEN 1994, 233, note 100; BOUCHARLAT 2001, 120.

¹⁹ BEDAL 2004, 123–4, 141.

²⁰ According to Xenophon, the Maeander River flowed through the *paradeisos* of the young Xerxes at Kelainai (*Anab.* I, 2, 7–9), and another river flowed through the Daskyleion *paradeisos* (*Hell.* IV, 1, 15–6).

most likely that they were designed in a natural way rather than an artificial, formal one²¹. The palace garden (the enclosed area next to the palace), on the other hand, was, as reported by Xenophon²², formally planted with trees in straight rows at right angles (a design feature that might be the result of the irrigation system). The garden was filled with different scented flowers²³, also probably planted in formal flower beds.

Looking at Pasargadae (fig. 1), one can see that a large garden, almost 100 hectares in size, surrounds the palace. The palace complex consisted of the main building (building F), where the king's throne was placed, and two smaller ones (pavilions A and B)²⁴. The garden between these buildings was a formal one, its lines determined by the stone water channels that ran at right angles around it²⁵. The channels were built from stone and at constant intervals widened into square basins²⁶; these were used to water the garden but at the same time were a decorative design element. The lack of water channels on the long axis of the garden, in front of the main building, may hint at an open visual axis connecting the palace with the garden²⁷. In this way the garden, which shares the same axis as the palace, becomes part of the palace, a kind of large audience hall where the king can meet his subjects²⁸. Except for the water channels, which were an important design element, there is no evidence in the historical sources or the archaeological record for the existence of large water features like pools or lakes in the gardens close to the palace²⁹.

Let us now briefly summarize the main design elements of the Achaemenid Persian royal gardens. The 'park-like' parts of the *paradeisos* were enclosed, naturally designed and included natural water features. The garden connected to the palace was more formally designed and the different buildings of the palace were scattered in it. The palace–garden visual axis was a major design element. The garden was formally divided and planted. The water channels were used as an important design element, while large water features are lacking in the formal part of the palace garden.

As for the Egyptian royal gardens³⁰, most of our information is derived from pictorial representations in tombs³¹ and from the archaeological record³². Gardens were an important part of private houses and pala-

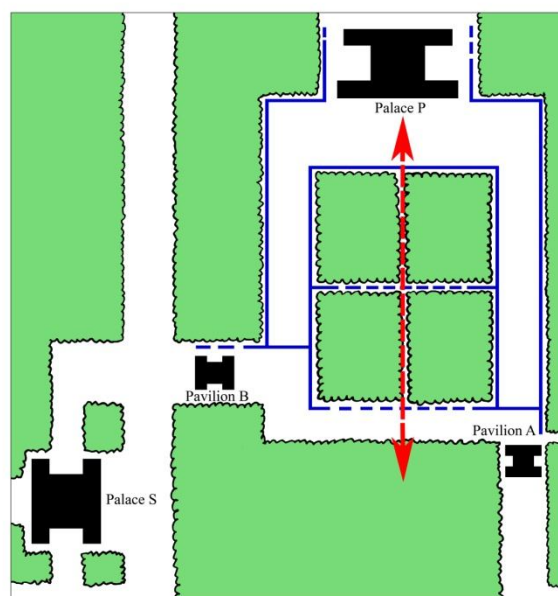


Fig. 1 – Pasargadae: the palace complex (black), the garden (green), the water channels (blue) and the visual axis connecting the palace with the garden (red) (modified from STRONACH 1978, fig. 48).

²¹ Although the Assyrian and Neo-Babylonian gardens are not included in this research, it is noteworthy that at least some of their royal gardens and parks were naturally designed. This can be seen in some of the reliefs in Ashurbanipal's north palace (seventh century BCE) or in the description of Sennacherib (eighth–seventh century BCE), who claims that he created in Nineveh a great park designed like Mt. Amanus, that in his royal gardens grows the vegetation of the mountains of Babylonia and Syria, and that other parks built by him included reeds and swamp-plants (WISEMAN 1983, 137–8).

²² Xenophon, Oec. IV, 20–24.

²³ Xenophon, Oec. IV, 20–24.

²⁴ STRONACH 1978, 107–12; 1997, 50; 2001, 96–7.

²⁵ STRONACH 1978, 107, 110; 1989, 480–1; 1994, 4; 1997, 50.

²⁶ STRONACH 1978, 107–9; 1994, 6–7.

²⁷ STRONACH 1994, 8; 1997, 52; 2001, 96, fig. 1.

²⁸ STRONACH 1997, 51–2.

²⁹ Nielsen (1994, 49) claims that there was a lake on the lower terrace of the Persepolis palace, but to my knowledge this has not yet been proven.

³⁰ For further information on Egyptian gardens, see WILKINSON 1998; HUGONOT 1989.

³¹ For the accuracy of the Egyptian artistic representations of gardens, see WILKINSON 1989, 18–9.

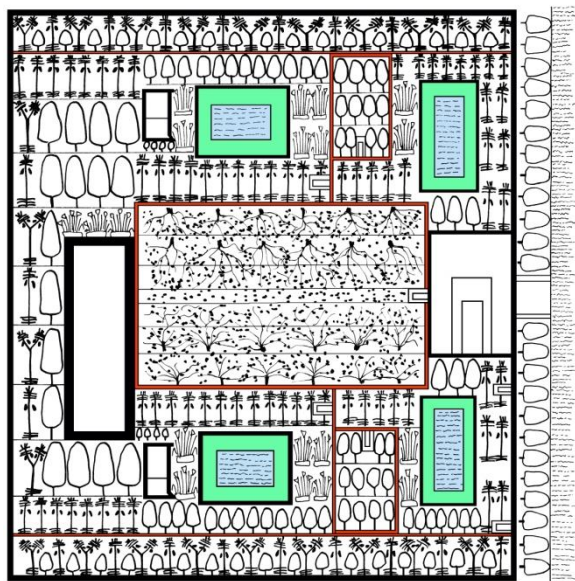


Fig. 2 – The garden painting from Sennufer's tomb (tomb 96 in Thebes): the garden division into smaller sections (red) (modified from TURNER 2005, fig. 2.16).

ce complexes, found both around the palace and in its inner courtyards³³. The garden was sometimes divided into smaller sections by terraces³⁴, as can be seen in the fourteenth-century BCE palaces of el-Amarna, walls or fences, as can be seen, for example, in the garden painting from Sennufer's tomb (tomb 96 in Thebes) (fig. 2)³⁵ or by rows of trees³⁶. In the center of the garden was a large pool, or in some cases several smaller ones³⁷. These pools, which started out as the garden's water tanks, with time also became a decorative element³⁸ and a religious symbol, representing the god Nun or the primordial 'Lotus Lake' at Hermopolis, where according to some myths life began³⁹. The pools were either rectangular or T-shaped and some had steps leading into them⁴⁰, as can be seen in the pools depicted in the tomb of Meryre at el-Amarna (mid-fourteenth century BCE) and in the tomb of Hatiay (tomb 324) at Thebes (thirteenth century BCE)⁴¹. At the pool's edge was an inner terrace for the cultivation of water plants⁴², as can be seen in many pictorial representations; in some cases, like the papyrus of Nakht from the Book of the Dead (fourteenth century

BCE) or the painting in the tomb of Sebekhotep (tomb 63) at Thebes (sixteenth–twelfth century BCE), there is a green strip along the inner side of the pool⁴³, while in others, like in the painting in the tomb of Nebamun at Thebes (sixteenth–twelfth century BCE), water plants are clearly depicted (fig. 3)⁴⁴. These pools were used as a water source for irrigation of the garden, as a habitat for fish and ducks, for boating and perhaps even for swimming⁴⁵. The garden and the palace did not always share the same axis, as can be seen in the

³² Unlike the Mesopotamian gardens, where a distinction can be made between the gardens of the different civilizations, in Egypt this chronological distinction is hard to make. According to Hugonot (1989, 7) and Wilkinson (1998, 3–4; 1990, 199), based on the epigraphical and iconographical sources and on the archaeological record, the Egyptian garden did not change dramatically during the four millennia BCE.

³³ WILKINSON 1990, 205; 1994, 8; 1998, 4, 6; GALLERY 1978, 47.

³⁴ WILKINSON 1994, 6.

³⁵ Sennufer's tomb (tomb 96 in Thebes) is dated to the late fifteenth–early fourteenth century BCE. This example, and some of the other examples used here, are much earlier in date than most of the evidence from Persia. This presents a chronological problem, since most of our knowledge of the pre-Hellenistic Egyptian gardens, as well as the artistic depictions of them, belongs to the Middle and New Kingdoms (WILKINSON 1998, 3–4; 1990, 199), mainly the 18th dynasty (HUGONOT 1989, 7), while the pre-Hellenistic Persian gardens are from a later date. However, since it appears that the gardens of Egypt underwent little change in pre-Hellenistic times (supra, N. 32), these examples will be cautiously used here.

³⁶ WILKINSON 1990, 199; 1994, 6.

³⁷ WILKINSON 1990, 199, 205; HUGONOT 1992, 21.

³⁸ BERRALL 1987, 12.

³⁹ WILKINSON 1998, 97.

⁴⁰ WILKINSON 1994, 8; 1998, 11; HUGONOT 1992, 21.

⁴¹ For the garden depicted in the tomb of Meryre at el-Amarna, see DAVIES 1903, (photograph) plate V, (drawing) plate XXXII. For the garden illustrated in the tomb of Hatiay (tomb 324) at Thebes, see HUGONOT 1998, fig. 113.

⁴² WILKINSON 1998, 10–1; 1994, 8; HUGONOT 1989, 158–9; 1992, 22.

⁴³ For the papyrus of Nakht from the Book of the Dead, see CARROLL 2003, fig. 1. For the tomb of Sebekhotep (tomb 63) at Thebes, see CARROLL 2003, fig. 9.

⁴⁴ For the tomb of Nebamun at Thebes, see CARROLL 2003, fig. 56. Other examples in which water plants can be seen along the inner side of the pool are the tomb of Kenamon (tomb 93) at Thebes (fifteenth century BCE): HUGONOT 1998, fig. 110; the tomb of Hekmarenakhte (tomb 222) at Thebes (twelfth century BCE): WILKINSON 1998, fig. 56; and probably also tomb 217 at Thebes (thirteenth–twelfth centuries BCE): WILKINSON 1998, fig. 10.

⁴⁵ WILKINSON 1998, 125.

Maru-Aten and other houses, like house Q.46.1 at el-Amarna⁴⁶. The axis of the garden usually ran through the center of the pool, and in many cases was an axis of symmetry⁴⁷. The gardens contained pavilions built next to pools or in some cases, mainly in temples or tombs, on islands in the center of pools⁴⁸. Examples of a pavilion on an island can be seen in the painting in the tomb of Hekmarenakhte (tomb 222) at Thebes (twelfth century BCE)⁴⁹. Last but not least is the planting in the garden; there were small flower beds around the pool and pergolas next to the pool provided support for vines⁵⁰. Trees like date palms, doam palms, sycamores or figs were planted further from the pool in straight rows, mostly consisting of trees of the same kind⁵¹.

The pre-Hellenistic Egyptian royal gardens thus used different design elements from those of the Achaemenid Persian royal gardens. They were built around the palace buildings and in the inner courtyards, were divided by different means into smaller units and had, in many cases, different axes for building and garden. Pools were, in most cases, in the center of the garden and on its axis, and had steps and inner terraced edges. Pavilions were built next to pools or on islands in them. The single feature that seems to be similar in both the pre-Hellenistic cultures discussed here is that, at least in the formal part of the garden, the trees and the flower beds were formally planted, again a design feature that might be the result of the irrigation system.

After identifying the main design elements of the pre-Hellenistic Persian and Egyptian royal gardens, let us now look at the Hellenistic royal gardens of Judea and attempt to determine whether they were indeed influenced by the earlier gardens. From the second to the first century BCE, the kingdom of Judea was ruled by the Jewish Hasmonean dynasty. Remains of several gardens were discovered in the excavations of the complex of the Hasmonean Winter Palaces in the desert oasis of Jericho⁵². The complex started out as an agricultural estate where palm trees and balsam shrubs were grown for their valuable products⁵³. The first palace was built next to the estate by the Hasmonean king Hyrcanus I, near the end of the second century BCE⁵⁴. Next to the palace, to its west, was a garden (fig. 4). Though the garden was not excavated, traces of the water channels that led water to it were found⁵⁵. On the north side of the garden, diverging from the main axis of the palace, were two pools. The pools, A(C)44 and A(C)94, which were used for swimming, had wide



Fig. 3 – The garden painting from the tomb of Nebamun at Thebes: the water plants along the terraced edge of the pool (adapted from WRESZINSKI 1923, 92).

⁴⁶ For the plan of the Maru-Aten, see HUGONOT 1989, fig. 97. For the plan of house Q.46.1 at el-Amarna, see BORCHARDT AND RICKE 1980, plan 2.

⁴⁷ On the symmetry and geometrical design of the Egyptian gardens, see WILKINSON 1998, 6–7, Wilkinson claims that there is a connection between the garden's symmetry and the building (tomb or temple) built in it; however, as shown in the examples above, this connection does not always exist.

⁴⁸ HUGONOT 1992, 25. While the pavilions were usually associated with tomb gardens, some can be seen in private gardens too, like those in the painting in Sennufer's tomb (fig. 2).

⁴⁹ For the tomb of Hekmarenakhte (tomb 222) at Thebes, see WILKINSON 1998, fig. 56.

⁵⁰ WILKINSON 1998, 99; HUGONOT 1992, 15.

⁵¹ WILKINSON 1998, 25, 40.

⁵² For more information on the excavations at Jericho, see KELSO AND BARAMKI 1955; NETZER 2001.

⁵³ NETZER 1999, 6.

⁵⁴ NETZER 2001, 2.

⁵⁵ NETZER 2001, 55.

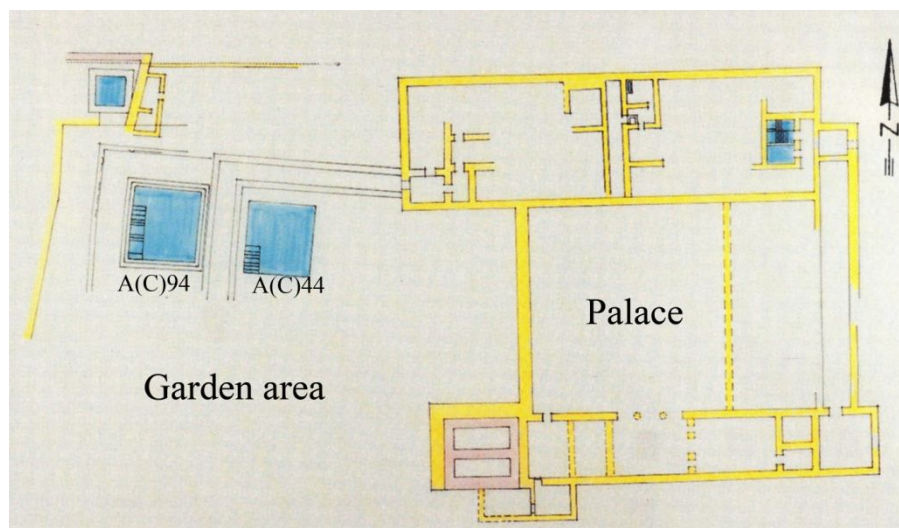


Fig. 4 – The palace of King Hyrcanus I in Jericho: the palace, the garden and the swimming pools (after NETZER 1999, fig. 9; courtesy E. Netzer).

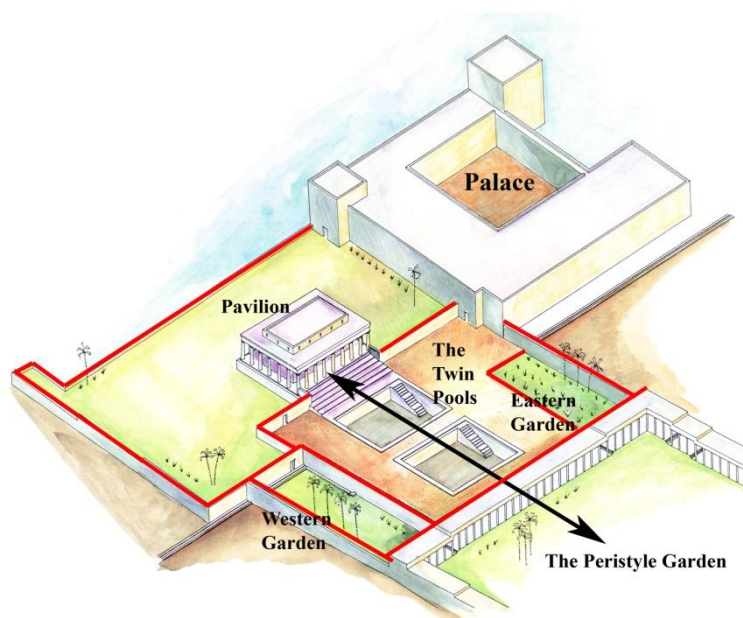


Fig. 5 – The palace of King Alexander Jannaeus in Jericho: the palace, the garden, the pavilion and the twin pools, the garden division (red) and the garden axis (black arrow) (after NETZER 1999, fig. 21; courtesy E. Netzer).

staircases leading into them and were surrounded by stepped inner benches, 45 cm high and wide, on all sides⁵⁶.

At the beginning of the first century BCE, King Alexander Jannaeus built his own palace in Jericho. The new palace covered the original palace built by Hyrcanus I and part of its garden. Instead, a new garden, the 'Pools Garden', was constructed in the area east of the palace, next to it but not on the same axis (fig. 5)⁵⁷. The southern part of the garden contained two large pools, A(B)101, and a pavilion, A(B)103, built on the axis of the main garden, from north to south⁵⁸. The 'twin pools' had wide staircases leading into

⁵⁶ NETZER 1995, 345; 2001, 57–9.

⁵⁷ NETZER 2001, 3.

⁵⁸ NETZER 2001, 77, 88, 303, 336.

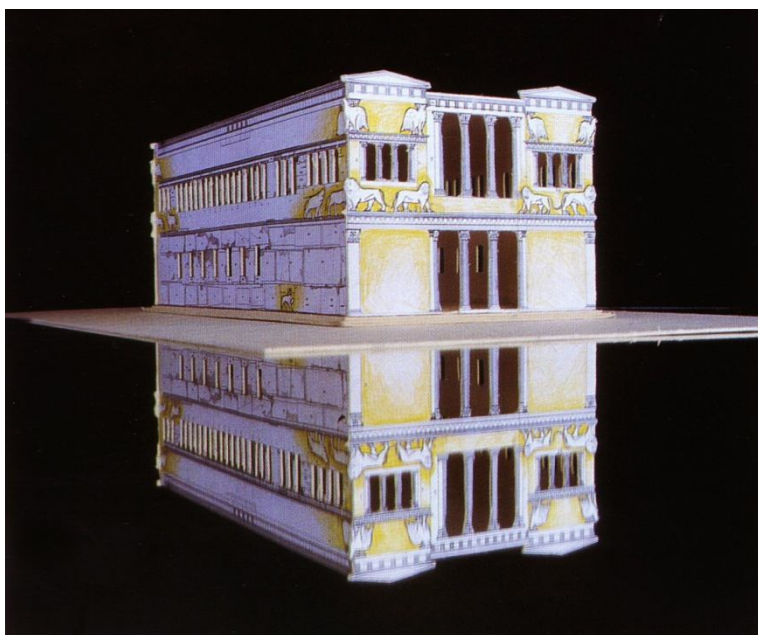


Fig. 6 – Iraq el-Amir, the palace of Hyrcanus the Tobaid: model showing the reflection of the palace in the lake (after NETZER 1999, fig. 175; courtesy E. Netzer).

them and stepped benches on all sides⁵⁹. The large garden around the pools was divided into smaller ones, the 'eastern' and the 'western' gardens, and at the end of its axis was another garden in a large peristyle courtyard, measuring 60 x 70 m. Both gardens were connected through openings in the wall that separated them and used the same symmetrical axis⁶⁰.

At a later stage Jannaeus built a new palace on an artificial mound that buried the old one and a road was built to connect the new palace with the garden⁶¹. Though the 'Pools Garden' was still part of the palace complex, they were no longer a single unit.

After 80 BCE, Queen Salome Alexandra built new palaces for her two sons, known as the 'Twin Palaces', to the south of the 'Pools Garden'. Each had its own garden surrounded by a high wall, with a swimming pool, pavilion

and triclinium⁶². The western palace garden was within a peristyle courtyard, while the eastern one was outdoors. Both gardens were built beside the palace rather than on the main axis; both pools had staircases and inner benches⁶³. The 'Pools Garden' was still in use but underwent some changes: the 'western' and 'eastern' gardens were cancelled and the wall between the 'Pools Garden' and the large peristyle courtyard was changed into a colonnade, making the two gardens into a single unit⁶⁴.

Another Hellenistic garden in the region is the garden of the estate at Tyrus (Iraq el-Amir, also known as Araq el-Emir) in Transjordan⁶⁵. According to Josephus,⁶⁶ it was built by Hyrcanus the Tobaid, a vassal of the Ptolemaic kings, at the beginning of the second century BCE. An ornate structure was built on an island in the center of a huge six-hectare lake that lay at the heart of a park⁶⁷. The palace, known as Qasr el-Abd, was accessible only by boat. The lake, as suggested by Netzer, probably also served as a reflecting pool for the magnificent structure (fig. 6)⁶⁸. This adds a new element to the design of the Judean gardens: a palace or pavilion built on an island in the middle of a lake or pool.

The element of a pavilion on an island in a pool can be seen in two additional gardens in the region, that at the heart of the Nabataean city of Petra⁶⁹ and that of King Herod's palace of Herodium (fig. 7)⁷⁰. These gardens are dated to the early Roman period (late first century BCE). Bedal connects the pool with the

⁵⁹ NETZER 1995, 347.

⁶⁰ NETZER 2001, 71.

⁶¹ NETZER 2001, 4.

⁶² NETZER 2001, 5–6, 304; 1999, 25.

⁶³ NETZER 1995, 348; 1999, 25.

⁶⁴ NETZER 2001, 5–6.

⁶⁵ For more information on the excavations at Tyrus (Iraq el-Amir) and the suggested reconstructions, see LAPP 1980; WILL 1991; NETZER 2000.

⁶⁶ Josephus, AJ XII, 230–3.

⁶⁷ NETZER 2000, 342.

⁶⁸ NETZER 2000, 343, 347.

⁶⁹ For more information on the excavations in the garden in Petra, see BEDAL 2004.

⁷⁰ NETZER 1981, 28–9.



Fig. 7 – Herodium, the palace of King Herod: the pool, in the center of the garden, and the pavilion in the middle of it (photographed by the author).

pavilion in Petra to King Herod's pool and pavilion in Lower Herodium⁷¹, while Netzer connects the Herodium pool to the Hasmonean swimming pool in Jericho⁷². It does indeed seem that we should look to the Hellenistic royal gardens of Judea as the source of the later designs.

Let us now summarize the main characteristics of the Hellenistic royal gardens of Judea. The gardens were located next to the palace and had their own axis, which was usually not the same as that of the palace. Two of them were located inside a peristyle courtyard. The garden was sometimes divided into smaller parts, using height differences, colonnades or walls. The division was not symmetrical and was probably a result of the topography. In the center of the garden was a large pool, or two, which according to the historical record were used as swimming pools⁷³. All the pools were rectangular with a wide staircase in one corner, and around their edges was a stepped inner bench or terrace. A pavilion was often built next to the pool or on an island. Unfortunately, we have no evidence for the planting of the Judean gardens. However, since formal planting in the garden close to the palace was common to both the Persian and the Egyptian royal gardens (as a symbol of order and probably also as an outcome of the irrigation system), one may assume that the planting in the Judean royal gardens was also formal,

All of the design elements that can be seen in the Hellenistic royal gardens of Judea are typical of the pre-Hellenistic Egyptian garden tradition. The relations between the palace and the garden, the division of the garden and the existence of gardens in the courtyards of the palace are all very similar. The pool is in the centre of the garden and on its axis and, though perhaps used for different functions, is similar in shape to the Egyptian garden pool. A close relationship exists between the pool and the pavilion, whether built next to it or on an island in it. On the other hand, elements that are typical of the Persian gardens, such as the

⁷¹ BEDAL 2004, 173.

⁷² NETZER 2006, 261.

⁷³ NETZER 1995, 344, 350–1.

palace–garden axis, the division of the palace into smaller buildings surrounded by the garden, and the use of water channels as a decorative element, are not found. Thus, as far as the physical aspects of design are concerned, it is clear that the pre-Hellenistic Egyptian gardens were the source of influence on the Hellenistic royal gardens of Judea. The Persian gardens, on the other hand, seem to have had hardly any influence on the Judean royal gardens. This does not totally rule out the influence of the Persian gardens on the Hellenistic ones; the arguments presented above are concerned mainly with the formal garden next to the palace and do not relate to the ‘park-like’ gardens (*paradeisos*) that may have been located further from the palace⁷⁴. However, the strong influence, seen here, of the pre-Hellenistic Egyptian gardens on the formal part of the royal Hellenistic gardens of Judea supports Carroll-Spillecke’s claim that the main influence on the Hellenistic royal gardens came from Egypt. As for the Persian influence mentioned by Neilsen and others, we might need to think of it as of a more regional one and to look for it mainly in the Hellenistic kingdoms that were geographically closer to Persia.

How then can we connect the pre-Hellenistic royal gardens of Egypt to the Hellenistic royal gardens of Judea? Apart from the royal gardens of Apharis in Memphis⁷⁵, we have no record of a pre-Hellenistic Egyptian royal garden that survived into the Hellenistic era, though there is evidence that some temple gardens did so⁷⁶. Moreover, we do not know what the gardens of the Hellenistic Ptolomaic palaces in Egypt, mainly those in Alexandria, looked like. Some of the descriptions of the city left to us by ancient authors⁷⁷ mention the gardens, but without elaboration of their design.

Hyrkanus the Tobaid was a vassal of the Ptolomaic kings of Egypt, and probably visited their palaces. The Hasmonean kings were also in a close relationship with the Ptolemaic kings. Therefore, one can assume that the gardens that they saw in the Ptolemaic palaces of Egypt were the inspiration for the design of their own gardens⁷⁸. Since the Hellenistic royal gardens of Judea show such great similarity in their design to the pre-Hellenistic Egyptian garden, it seems to me that we can view the Hellenistic royal gardens of Egypt as the ‘missing link’ between the pre-Hellenistic Egyptian gardens and the Hellenistic royal gardens of Judea. If this is the case, further study of the existing remains of the Hellenistic Judean gardens, together with examination of the design of the pre-Hellenistic Egyptian gardens, might help us to reconstruct at least the main design elements of the lost Hellenistic royal gardens of Egypt, particularly of Alexandria.

Acknowledgements

My heartfelt thanks to Dr. Kathryn Gleason and Dr. Elizabeth Macaulay-Lewis for inviting me to participate in the AIAC conference and to present the results of my research, and for all their good advice. I am grateful to Mrs. Rosa Bass for her support of my participation in the conference and my ongoing research. Special thanks to Sue Gorodetsky for all her editorial help and advice.

Rona-Shani Evyasaf

The Institute of Archaeology, The Hebrew University at Jerusalem,
Mt. Scopus campus, Jerusalem, Israel
E-mails: rona.evyasaf@gmail.com

⁷⁴ As briefly mentioned above, the meaning of the term *paradeisos* as used by ancient authors such as Josephus, who uses it in reference to vast plantations in the oasis of Jericho (JW iv.8.3) and the estate of Hyrcanos the Tobaid (*supra*, N. 67), is disputed by scholars and is beyond the scope of this paper, which deals mainly with the physical aspects of the gardens’ design.

⁷⁵ NIELSEN 1994, 27.

⁷⁶ According to Wilkinson (1998, 78–9), the roots of apricot trees were found during excavations in the planting pits of the temple of Queen Hatshepsut at Deir el-Bahari. Apricots were introduced to Egypt only in Ptolemaic-Roman times.

⁷⁷ Strabo, *Georg.* XVII, 1, 8; Pliny, *NH* V, 11, 62–3.

⁷⁸ This is also suggested by, among others, NETZER 2000, 347; BEDAL 2004, 150–1. On the influence of Ptolomaic architecture on Judean and Nabatean architecture, see also MCKENZIE 2007, 80, 95–7.

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